

PRE051: Preparatory Computing Term 141

Credit Hours: 4

Prerequisites: None

Course Description

Students taking this course will gain a solid understanding of the fundamentals of computers and computing as well as current trends in technology as they are applied in today's enterprise environment.

Instructor Contact Information

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| Instructor Name | Gerard Arthus |
| Instructor Email | garthus801@gmail.com |
| Instructor Phone | Cell – 631-335-5250 Home - 574-217-8726 |

Course Length

The college evaluates each course in terms of quarter hours of credit. One unit of credit is usually equivalent to a minimum of ten academic instruction hours of lecture and examination, twenty hours of skill development, or thirty hours of externship, or a combination of the three. An academic instructional hour is fifty minutes.

This class will meet for the equivalent of a minimum of 55 instructional hours or as otherwise scheduled by the college and at least in conformance with this minimum and the Syllabus. As specified by the Method of Instruction section of this Outline, the instructor will ensure that the total class sessions presented consist of a minimum of 27.5 direct faculty instruction hours and a maximum of 27.5 appropriate classroom activity hours.

All course offerings require outside preparation time, which is approximately two hours per lecture instructional hour and/or one hour per skill development instructional hour, depending on the background, interest, abilities, and motivation of the individual student.

Course Objectives

By the end of this course, you should be able to:

1. Differentiate among laptops, tablets, desktops and servers and describe the purpose and uses of smartphones, digital cameras, portable media players, e-book readers and game devices.
2. Describe the relationship between data and information.
3. Understand various input options (including keyboards, pointing devices, voice and video input, and scanners), output options (including printers, displays, and speakers), and storage options (including hard disks, solid-state drives, USB flash drives, memory cards, optical discs and the cloud)
4. Describe the characteristics and types of servers.
5. Differentiate the Internet from the web and describe the relationship among the web, webpages, websites and web servers. Explain the purpose of a browser, a search engine and an online social network. Describe strategies to enter effective search text.
6. Differentiate between wired and wireless network technologies, and identify reasons individuals and businesses use networks. Describe various broadband Internet connections.
7. Describe the purpose of an IP address and its relationship to a domain name.
8. Describe cloud computing and identify its uses.
9. Differentiate a port from a connector, identify various ports and connectors and differentiate among Bluetooth, Wi-Fi, and NFC wireless device connections.
10. Identify the general categories of programs and apps and describe how an operating system interacts with applications and hardware.
11. Identify the key features of productivity applications, graphics and media applications.
12. Identify the key features of file and disk management tools.
13. Define digital security and briefly describe the types of cybercriminals.
14. Describe the various types of Internet and network attacks and explain ways to safeguard against these attacks.
15. Discuss techniques to prevent unauthorized computer access and use, including access controls, user names, passwords, possessed objects and biometric devices.
16. Discuss how encryption, digital signatures and digital certificates work.
17. Identify the key features of security tools including firewalls, antivirus programs, malware removers and Internet filters.
18. Identify the key features of file and disk management tools.
19. Explain options available for backing up.
20. Recognize issues related to information accuracy, intellectual property rights, codes of conduct, and green computing.

Grade-book

A student's performance in this course will be evaluated using a variety of factors listed below. Instructors must use a minimum of three (**homework, tests and a final exam are required**), and it is recommended that instructors use all five of the areas in your evaluation.

The exact weight to be given to any particular area is determined by the instructor and will normally fall within the ranges listed below.

Syllabus

Course Number: PRE051

National College

Revised 4-22-13

| Area | Percentage for this Course | Suggested Range |
|------------------------|----------------------------|-----------------|
| | | |
| Final Exam | 25% | 20 – 25% |
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| Tests | 40% | 20 – 40% |
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| Homework | 10% | 10 – 15% |
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| Project/Research Paper | 15% | 20 – 25% |
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| Class Participation | 10% | 10 – 15% |
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| TOTAL | 100% | |

| Letter Grade | Points | Explanation |
|--------------|------------|---------------|
| A | 94-100 | Excellent |
| B | 84-93 | Above Average |
| C | 74-83 | Average |
| D | 64-73 | Below Average |
| F | 63 & Below | Failure |

Textbook & Instructional Material

Discovering Computers, Fundamentals: First Edition, by Vermatt, Sebok and Freund, Course Technology, Cengage Learning; 2014.

Teaching tools are available from the vendor on a CD ROM that includes a test bank and instructor's manual. These are also available online.

The instructor might utilize additional instructional materials as provided by the publisher.

Course Outline

Term: 141

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| Class Date: <u>Week 1 – 02 December 2013</u> Chapter 1: Digital Literacy: <i>Introducing a World of Technology</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities <u>How To; Your Turn: Complete exercises 2, 3, and five on pages 46-47. Go to the Internet Archive web-site:</u> https://archive.org/ <u>Turn in at least three links to items that you find from the Video, Audio and Text Archives.</u> Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information. | Homework <u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 44</u> <u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u> |
| Class Date: <u>Week 2 – 09 December 2013</u> Chapter 2: <i>Accessing, Searching, Sharing and Communicating Information</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities | Homework |

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| <p><u>How To: Your Turn: Complete exercises 1, 2, 3, and 4 on pages 96-97.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 95.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |
| <p>Class Date: <u>Week 3 – 16 December 2013</u> Chapter 3: <i>Computers and Mobile Devices: Evaluating the Possibilities</i></p> | <p>Homework Due Date: <u>By the end of the next week.</u></p> |
| <p>In Class Activities</p> | <p>Homework</p> |
| <p><u>How To: Your Turn: Complete exercises 1, 2, 3, and 4 on pages 144-145.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 150.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |

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| Class Date: <u>Week 4 – 30 December 2013</u> Chapter 4: <i>Programs and Applications: Using Software at Work, School, and Home</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities | Homework |
| <p><u>How To; Your Turn: Complete exercises 1, 2, and 3 on pages 194-195.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 192.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |
| Class Date: <u>Week 5 – 06 January 2013</u> Chapter 5: <i>Digital Safety and Security: Identifying Threats, Issues, and Defenses</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities | Homework |

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| <p><u>How To; Your Turn: Complete exercises 1, 2, and 3 on pages 240-241.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 192.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |
| <p>Class Date: <u>Week 6 – 13 January 2013</u> Chapter 6: <i>Inside Computers and Mobile Devices: Exploring the Components</i></p> | <p>Homework Due Date: <u>By the end of the next week.</u></p> |
| <p>In Class Activities</p> | <p>Homework</p> |
| <p><u>How To; Your Turn: Complete exercises 1, 2, 3, and 4 on pages 280-281.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 278.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |

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| Class Date: <u>Week 7 – 20 January 2013</u> Chapter 7: <i>Input and Output: Examining Popular Devices</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities | Homework |
| <u>How To; Your Turn: Complete exercises 1, 2, 3, and 4 on pages 328-329.</u> Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information. | <u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 326.</u> <u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u> |
| Class Date: <u>Week 7 – 20 January 2013</u> Chapter 8: <i>Digital Storage: Preserving on Media in the Cloud</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities | Homework |
| <u>How To; Your Turn: Complete exercises 1, 2, and 3 on</u> | <u>Check-Point Exercises: Complete all True/False and</u> |

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| <p><u>pages 370-371.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Multiple Choice on page 368.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |
| <p>Class Date: <u>Week 8 – 27 January 2013</u> Chapter 9: <i>Operating Systems:</i></p> | <p>Homework Due Date: <u>By the end of the next week.</u></p> |
| <p>In Class Activities</p> | <p>Homework</p> |
| <p><u>How To; Your Turn: Complete exercises 1, 2, 3, and 4 on pages 408-409.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 406.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |

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| Class Date: <u>Week 8 – 27 January 2013</u> Chapter 10: <i>Communications and Networks</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities | Homework |
| <p><u>How To; Your Turn: Complete exercises 1, 2, and 3 on pages 456-457.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 454.</u></p> <p><u>View all of the materials for this week in the PRE051 Class in the Moodle Portal.</u></p> |
| Class Date: <u>Week 9 – 03 February 2013</u> Chapter 11: <i>Information and Data Management: Organizing, Maintaining, Verifying, and Accessing</i> | Homework Due Date: <u>By the end of the next week.</u> |
| In Class Activities | Homework |
| <p><u>How To; Your Turn: Complete exercises 1, 2, and 3 on pages 502-503.</u></p> <p>Document and record all work with appropriate</p> | <p><u>Check-Point Exercises: Complete all True/False and Multiple Choice on page 500.</u></p> <p><u>View all of the materials for this week in the PRE051</u></p> |

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| <p>screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Class in the Moodle Portal.</u></p> |
| <p>Class Date: <u>Week 9 – 03 February 2013</u> Chapter 12: <i>Information Systems and Program Development: Designing and Bundling Solutions</i></p> | <p>Homework Due Date: <u>By the end of the next week.</u></p> |
| <p>In Class Activities</p> | <p>Homework</p> |
| <p><u>How To; Your Turn: Complete exercises 1 and 2 on pages 550-551.</u></p> <p>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</p> | <p><u>Prepare for final exam</u></p> |

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This course has an in-class final exam. Final exam date: 10 February 2013

Additional Final Exam Information:

Method of Instruction

Instructional techniques must be appropriate, and at a collegiate level, to the specific goals and objectives cited above. Students and instructors must have a clear understanding of the goals and time requirements of this course, the nature of the course context, and method of evaluation.

This course has two distinct but related instructional phases. The first component constitutes a minimum of 27.5 direct faculty instruction hours. This component is the lecture series and provides instruction in theory, principles or practices of the course. The second component constitutes a maximum of 27.5 appropriate classroom activity hours. This component is the skill development phase of the course and provides students the opportunity to apply knowledge gained in the lecture series. Method of instruction must fulfill the intended learner outcomes and competencies stated in the course goals and objectives and are appropriate to the capabilities of the students. For career oriented courses, the instructor must demonstrate that an effective relationship exists between curricular content and current practices in the field.

Additional Class Notes

Go to <http://www.openeducation.org/moodle> to use the Web-Assisted site for this course. Quizzes and discussion forums will be completed on-line at this site; and all other assignments will be uploaded there.